



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/729,497   | 12/05/2003  | Ahmed S. Abuelyaman  | 58069US004                      | 1945                        |
| 32692 7590 11/30/2007<br>3M INNOVATIVE PROPERTIES COMPANY<br>PO BOX 33427<br>ST. PAUL, MN 55133-3427 |             |                      | EXAMINER<br>ROBERTS, LEZAH      |                             |
|  |             |                      | ART UNIT<br>1614                | PAPER NUMBER                |
|  |             |                      | NOTIFICATION DATE<br>11/30/2007 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

# Office Action Summary

Application No.

10/729,497

Applicant(s)

ABUELYAMAN, AHMED S.

Examiner

Lezah W. Roberts

Art Unit

1614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-38 and 40-74 is/are pending in the application.
- 4a) Of the above claim(s) 5, 27, 29 and 46-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-12, 14-26, 28, 30-38 and 40-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to the Amendment filed September 12, 2007. All previous rejections have been withdrawn unless stated below.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claims*

#### **Claim Rejections - 35 USC § 102 – Anticipation (Previous Rejection)**

Claims 1-4, 6, 8-26, 28 and 30-45 were rejected under 35 U.S.C. 102(b) as being anticipated by Haberland et al. (DD 273 846 A1, Already of Record). This rejection is maintained.

#### **Applicant's Arguments**

Applicant argues Haberland et al. do not teach that the 1 weight percent aqueous N-acroyl-amino bisphosphonic acid primer solution comprises an ethylenically unsaturated polymerizable component as required by independent claims 1, 2, 22 and 23. The compositions of the reference contain less than 0.56 weight percent of the N-acroyl-amino bisphosphonic acid and does not comprise the bisphosphonic acid in an amount sufficient to etch hard surfaces. This argument is not persuasive.

#### **Examiner's Response**

Haberland et al. disclose bisphosphonic acids may comprise 0.01 to 10% of the compositions and therefore if a 2% compositions was used the compositions exemplified by example 3 would comprise 1.12% bisphosphonic acid. The example

exemplified one embodiment or one composition encompassed by the reference. The range recited above encompasses claims 22 and 23. Even if this was not the case, independent claims 1 and 2 do not recite what a sufficient amount is and therefore the reference encompasses these claims. Example 3 discloses a composition comprising an ethylenically component along with the bisphosphonic acid. Therefore the rejection is maintained.

**Claim Rejections - 35 USC § 103 – Obviousness (Previous Rejection)**

Claims 1-4, 6, 8-26, 28 and 30-45 were rejected under 35 U.S.C. 103(a) as being unpatentable over Omura et al. (US 4,499,251, Already of Record). The rejection is maintained.

**Applicant's Arguments**

Applicant argues based on the third structure in col. 6, as recited by the Examiner, it is not possible to know to which type of group (phosphonic acid or phosphoric acid ester) Omura et al. are referring to in this structure. Furthermore the group designated "A<sub>2</sub>" does not provide information regarding the atom or atoms to which the acid or ester groups are bonded. Applicant submits that most of the compounds specifically disclosed by Applicant are phosphoric acids not phosphonic acids as required by the instant claims 1, 2, 22 and 23. Applicant also submits the amendment to the claims recite moiety as oppose to group previously recited. This limits the moiety to unsubstituted groups. Applicant further argues Omura does not teach, suggest, or enable any other method to prepare phosphonic acids, including

Art Unit: 1614

phosphonic acids wherein the group that corresponds to  $R_4$  and  $R_a$  is unsubstituted.

These arguments are not persuasive.

Examiner's Response

It is concluded that Omura is referring to phosphonic acid because A is defined as a hydrocarbon, which is a carbon/hydrogen compound and does not comprise oxygen. If oxygen was bonded to  $A_2$ , the phosphorous comprising compound would comprise four oxygens as opposed to three. Since the "A" groups are hydrocarbons, any group attached to "A" is attached to a carbon because hydrogen normally creates one bond. The Examiner points Applicant's attention to col. 6, Formula II. The structure encompasses formula I and II of the instant claims. The group  $(X_1)_k$  is optional. Group  $R_a$  is a hydrocarbon group optionally substituted as required by the instant claims recitation of "moiety". The ethylenically component is that of the recited claims where  $X_2$  may be nitrogen and  $R_5$  represents hydrogen or methyl. Although Omura does not disclose how to make phosphonic acids where the groups that correspond to  $R_4$  and  $R_a$  are substituted, it is reasonable for one of ordinary skill in the art to look to the art to determine how to synthesize these compounds.

Claims 1-4, 6, 8-12, 14-26, 28, 30-38 and 40-45 are rejected.

Claims 5, 7, 27, 29 and 46-74 are withdrawn.

No claims allowed.

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lezah W. Roberts whose telephone number is 571-272-1071. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lezah Roberts  
Patent Examiner  
Art Unit 1614



Frederick Krass  
Primary Examiner  
Art Unit 1614

